

Claims

1. An injection molded product made of a molding composition comprising (A) 20 to 98.8 wt. of at least one polyester being selected from the group consisting of:

an aromatic polyester copolymer (a) having repeating units comprising an acid component and a glycol component, wherein the acid component comprises about 50 to 90 mol% of terephthalic acid, about 0.2 to about 6 mol% of sulfonic acid metal salt, and about 4 to 49.8 mol% of aliphatic dicarboxylic acid; wherein the glycol component comprises about 50 to 99.9 mol % of ethylene glycol and about 0.1 to 50 mol% of diethylene glycol;

a polyester copolymer (b) prepared by copolymerization with said copolymer (a) with polyalkylene glycol,

a branched polyester copolymer (c) prepared by polycondensation of said copolymer (a) with polyalkylene glycol, and,

a polyester copolymer (d) having repeating units comprising aromatic dicarboxylic acids and a glycol component; with the proviso that the mol% of said aromatic dicarboxylic acids of said polyester copolymer is less than the mol% of the carboxylic acid content of said copolymers (a), (b), and (c);

(B) 1 to 60 wt.% of material selected from the group consisting of reinforcements and fillers;

(C) 0. 1 to 7 wt.% of crystallization accelerator;

(D) 1 to 60 wt.% of at least one flame retardant selected
5 from the group consisting of an inorganic flame retardant, a phosphorous-based flame retardant and a phenolic polymer; and

(E) 0.1 to 5 wt.% of lubricant.

10 2. The injection molded product of claim 1, in which the inorganic flame retardant is a hydroxide such as $Mg(OH)_2$ and $Al(OH)_3$.

15 3. The injection molded product of claim 1, in which the melting point of the molded product is not lower than $170^{\circ}C$ and not more than $240^{\circ}C$.

20 4. The injection molded product of any one of claim 1 to 3 in which the molding composition is a blend of said copolymers (a), (b), (c) and (d).

5. The injection molded product of any one of claims 1 to 4 wherein said product has heat distortion at temperature not lower than $80^{\circ}C$ and the crystallization

speed is faster than 1.2 min. at 120°C.

6. A method for manufacturing an injection molded product comprising the steps of:

5 (I) blending

(A) 20 to 98.8 wt% of at least one polyester selected from the group consisting of:

an aromatic polyester copolymer (a) having repeating units comprising an acid component and a glycol component,
10 wherein the acid component comprises about 50 to 90 mol% of terephthalic acid, about 0.2 to about 6 mol% of sulfonic acid metal salt, and about 4 to 49.8 mol% of aliphatic dicarboxylic acid; wherein the glycol component comprises about 50 to 99.9 mol % of ethylene glycol and about 0. 1
15 to 50 mol% of diethylene glycol;

a polyester copolymer (b) prepared by copolymerization with said copolymer (a) with polyalkylene glycol,

a branched polyester copolymer (c) prepared by
20 polycondensation of said copolymer (a) with polyalkylene glycol, and,

a polyester copolymer (d) having repeating units comprising aromatic dicarboxylic acids and a glycol component; with the proviso that the mol% of said

aromatic dicarboxylic acids of said polyester copolymer is less than the mol% of the carboxylic acid content of said copolymers (a), (b), and (c);

5 (B) 1 to 60 wt% of material selected from the group consisting of reinforcements and fillers,

(C) 0.1 to 7 wt% of crystallization accelerator,

10 (D) 1 to 60 wt% of at least one flame retardant selected from the group consisting of an inorganic flame retardant, a phosphorous-based flame retardant and a phenolic polymer; and

(E) 0.1 to 5 wt% of lubricant

(II) injection molding said molding composition prepared by said blending.